

## 0.5mm Fast Silicon PIN photodiode

Version: 3.1 17-03-01

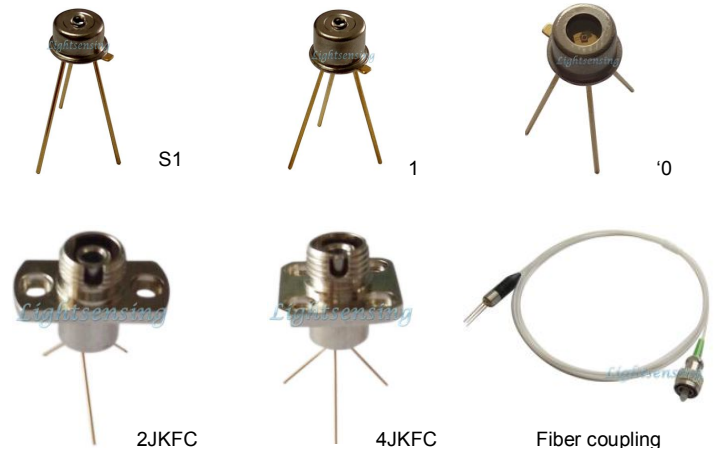
### Model: LSSPD-0.5

#### Features:

- High reliability, Ultra low dark current
- 400-1100nm spectral range
- Active diameter 0.5x0.5mm
- Very fast rise time up to 250ps
- Hermetic TO46 Can or with receptacle or with fiber coupling

#### Applications:

- Optical sensor
- High speed light pulse test
- Laser finding range and laser lidar
- Industrial automatic control
- Space light detect equipment



#### Absolute maximum ratings:

parameter	symbol	value	unit
Operating temperature	Top	-40~+85	°C
Storage temperature	Tstg	-40~+100	°C
Forward current	I <sub>f</sub>	5	mA
Reverse voltage	V <sub>r</sub>	30	V
Soldering temperature(time)	T <sub>s</sub> (10s)	260	°C

#### Electrical and optical characteristics:(T=25°C)

parameter	symbol	unit	Value (typ.)
Active diameter	Φ	mm	0.5x0.5
Spectral range	λ	nm	400-1100
Responsivity	Re(V <sub>R</sub> =5V,λ=405nm)	mA/mW	0.1
	Re(V <sub>R</sub> =5V,λ=650nm)	mA/mW	0.35
	Re(V <sub>R</sub> =5V,λ=850nm)	mA/mW	0.45
	Re(V <sub>R</sub> =5V,λ=1064nm)	mA/mW	0.20
Response time	T <sub>r</sub> (R <sub>L</sub> =50Ω, V <sub>R</sub> =5V)	ps	250
Dark current	I <sub>d</sub> (V <sub>R</sub> =0V)	pA	0.1
	I <sub>d</sub> (V <sub>R</sub> =5V)	pA	50
Reverse Breakdown voltage	V <sub>BR</sub> (I <sub>R</sub> =10uA)	V	120
Junction capacitance	C <sub>j</sub> (f=1MHz, V <sub>R</sub> =0V)	pF	15
	C <sub>j</sub> (f=1MHz, V <sub>R</sub> =5V)	pF	1.5
Saturated Optical Power	P <sub>s</sub> (V <sub>R</sub> =5V)	mW	7
Operating voltage	V <sub>R</sub>	V	0-20
Shunt resistance	R <sub>sh</sub> (V <sub>R</sub> =10mV)	GΩ	100
package	Hermetic TO46 Can or with receptacle or with fiber coupling		

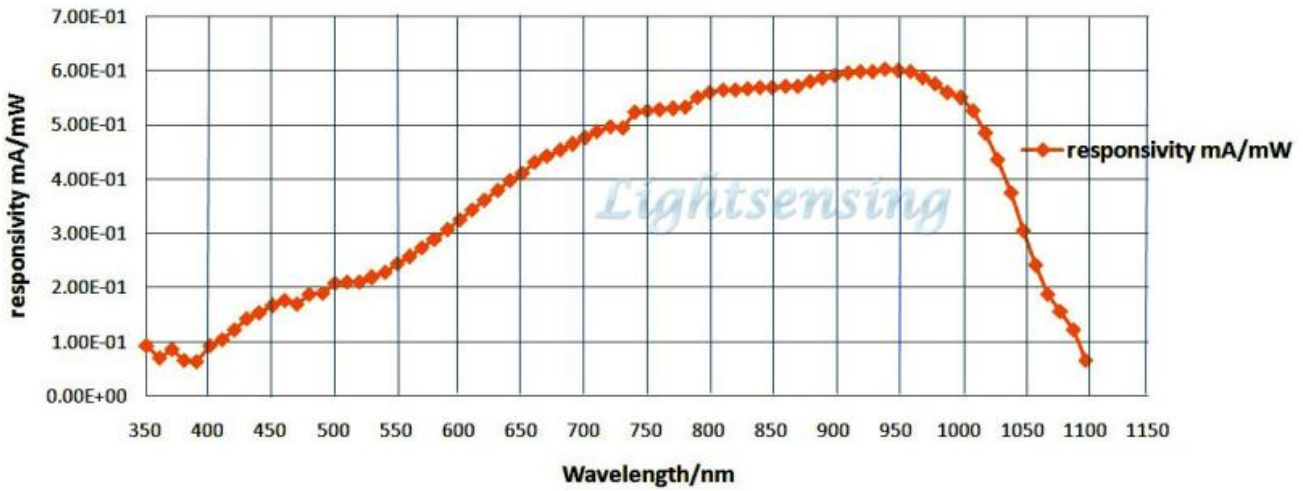
**NOTICE:** The above product specifications are subject to change without notice.

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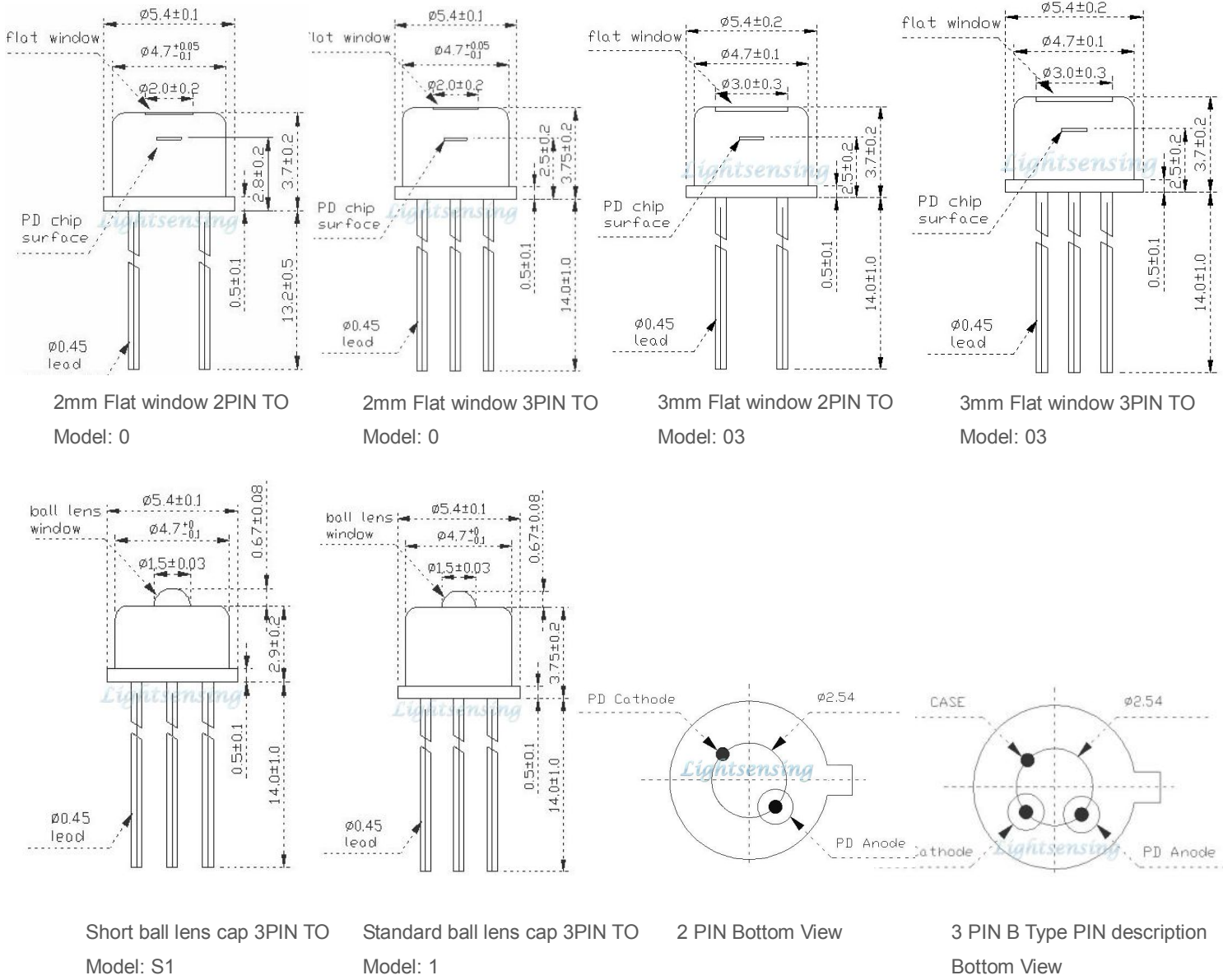
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### The typical Responsivity curve



### TO package and Lead



**Note:** In order to get other dimensions, please contact us.

## Order information

LSSPD-0.5-X-X

X=2P 2 PIN out

X=3P 3 PIN out

X=0

X=03

X=S1

X=1

X=SMFA/P

X=SMSA

X=5MMFA/P

X=6MMFA/P

X=10MMFA/P

X=20MMFA/P

X=2JKFC

X=4JKFC

X=Other

TO-46 Can with 2mm Flat window cap

TO-46 Can with 3mm Flat window cap

TO-46 Can with short ball lens cap

TO-46 Can with standard ball lens cap

TO-46 Can with SM Fiber coupling with FC-APC/FC-PC connector

TO-46 Can with SM Fiber coupling with SC-APC connector

TO-46 Can with 50um MM Fiber coupling with FC-APC/FC-PC connector

TO-46 Can with 62.5um MM Fiber coupling with FC-APC/FC-PC connector

TO-46 Can with 105um MM Fiber coupling with FC-APC/FC-PC connector

TO-46 Can with 200um MM Fiber coupling with FC-APC/FC-PC connector

TO-46 Can with fixed receptacle with FC connector and 2 pieces of fix holes

TO-46 Can with fixed receptacle with FC connector and 4 pieces of fix holes

By customer's request, **Example, We can provide photodiode with filter**

## The cautions

1: The above product specifications are subject to change without notice.

2: The suitable ESD protection is required in storage, transportation and using

3: The fiber bending radius no less than 20mm for avoiding fiber damaged ,Be sure the fiber coupling facet is clean before connecting it to opto-circuit.